Category 1 :**IV fluids: amount**
Category 2 :**Icu organization**

A316 - ***Effectiveness of simulation-based learning in intravenous medication safety: a randomized controlled study***

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Introduction:

This randomized controlled study assessed the impact of a 3-hour intravenous medication safety simulation-based learning (SBL) on self-efficacy, stress, knowledge and skills of nursing students. Medication administration error is a worldwide concern [1], that has been linked with a lack of knowledge and skills in safe medication administration among new graduate and student nurses [2-4]. Preventing medication errors could therefore involve training through simulation.

Methods:

Participants (n=99) were randomly assigned either to the control group (CG, n=50) or the experimental group (EG, n=49). While CG and EG both had a traditional clinical internship, EG beneficiated in addition the 3-hour SBL, using standardized patients in the context of an intensive care unit. The two groups were assessed twice: at T0 and T1 (four weeks later), through an Objective Structured Clinical Examination (OSCE) and questionnaires. Two blinded experts rated the students OSCE with an evaluation grid.

Results:

Mean participants age was 21,2. There were no statistically differences between groups at T0. Compared to the CG (0%), the EG increased its self-efficacy (+19,35%) with a significantly difference ($p<0,001$) at T1. The SBL conducted to a greater increase of knowledge and skills in the EG (respectively +150%, +128%) than in the CG (respectively +46% and +47%), with a statistically significant difference ($p<0,0001$).

Conclusion:

Results reinforce the interest of a short SBL using standardized patients to improve medication administration. Clinical impact of these observations requires further evaluation to determine potential transfer in clinical settings and retention over time.

References:

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